

What is claimed is:

1. A device comprising:

a first mechanism capable of converting a received file according to a printer-independent page description language (PDL) into a first interim format; and,

5 a second mechanism capable of converting the received file as converted to a second interim format into a printer-specific printer language.

2. The device of claim 1, wherein the first interim format is identical to the second interim format.

3. The device of claim 1, further comprising an interface capable of converting the
10 received file from the first interim format to the second interim format, the first interim format different than the second interim format.

4. The device of claim 1, further comprising a client input/output (I/O) mechanism to communicatively couple with one or more clients, and capable of receiving the received file from one of the one or more clients.

15 5. The device of claim 4, wherein the client I/O mechanism is able to communicatively couple with the one or more clients via one or more of: a network connection, a serial bus connection, a wireless infrared (IR) connection, and a wireless radio-frequency (RF) connection.

6. The device of claim 1, further comprising a printer input/output (I/O) mechanism to communicatively couple with a printer capable of understanding the received file as converted to the printer-specific printer language.

7. The device of claim 6, wherein the printer I/O mechanism has a port
5 corresponding to a port of the printer, such that the device directly connects to the printer via the port of the printer I/O mechanism plugging into the port of the printer.

8. The device of claim 1, wherein each of the first mechanism and the second mechanism is independently upgradeable with respect to one another, the first mechanism independently upgradeable to support one or more additional printer-
10 independent PDL's, and the second mechanism independently upgradeable to support one or more additional printer-specific printer languages.

9. A device comprising:

an independently upgradeable printer-independent page description language (PDL) interpretation module;

15 an independently upgradeable printer-specific printer language creation driver module; and,

a module interface interfacing the printer-independent PDL interpretation module to the printer-specific printer language creation driver module.

10. The device of claim 9, wherein the printer-independent PDL interpretation module
20 converts a file from a corresponding printer-independent PDL to a first interim format, the module interface converts the file from the first interim format to a second interim format, and the printer-specific printer language creation driver module

converts the file from the second interim format to a corresponding printer-specific printer language.

11. The device of claim 9, further comprising:

a client input/output (I/O) communication interface coupled to the printer-
5 independent PDL interpretation module and communicatively coupled to one or more clients; and,
a printer I/O communication interface coupled to the printer-specific printer language creation driver module and communicatively coupled to a printer.

12. The device of claim 9, wherein the printer-independent PDL interpretation module
10 comprises one or more printer-independent PDL interpreters corresponding to different PDL's.

13. The device of claim 12, wherein the printer-independent PDL interpretation module is upgradeable to add one or more additional printer-independent PDL interpreters corresponding to additional PDL's.

14. The device of claim 9, wherein the printer-specific printer language creation driver module comprises one or more printer-specific printer language creation drivers corresponding to different printers.

15. The device of claim 14, wherein the printer-specific printer language creation driver is upgradeable to add one or more additional printer-specific printer language
20 creation drivers corresponding to additional printers.

16. A device comprising:

first means for converting a received file according to a printer-independent page description language (PDL) to a first interim format;

second means for converting the received file as converted to a second interim

5 format to a printer-specific printer language; and,

third means for interfacing the first means with the second means.

17. The device of claim 16, wherein the first interim format is identical to the second interim format.

18. The device of claim 16, wherein the first interim format is different than the
10 second interim format, the third means converting the received file from the first interim format to the second interim format.

19. The device of claim 16, further comprising means for communicating with one or more clients to initially receive the received file.

20. The device of claim 16, further comprising means for connecting to one or more
15 printers to send the received file as converted from the interim format to the printer-specific printer language for printing.

21. A method comprising:

receiving a file according to a printer-independent page description language (PDL);

20 converting the file from the printer-independent PDL to a first interim format;

converting the file from a second interim format to a printer-specific printer

language; and,

sending the file as converted to the printer-specific printer language to a printer
for printing.

22. The method of claim 21, further comprising, after converting the file from the
5 PDL to the first interim format, and prior to converting the file from the second
interim format to the printer-specific language, converting the file from the first
interim format to the second interim format, the first interim format being different
than the second interim format.

23. The method of claim 21, wherein the first interim format is identical to the second
10 interim format.

24. The method of claim 21, further comprising upgrading to support a second
printer-independent PDL.

25. The method of claim 24, further comprising:
receiving a second file according to the second printer-independent PDL;
15 converting the second file from the second printer-independent PDL to a third
interim format;

converting the second file internally from the third interim format to the printer-
specific printer language; and,

sending the second file as converted to the printer-specific printer language by the
20 device to the printer for printing.

26. The method of claim 21, further comprising upgrading to support a second printer-specific printer language.

27. The method of claim 26, further comprising:

receiving a second file according to the printer-independent PDL;

5 converting the second file from the printer-independent PDL to a third interim format;

converting the second file from the third interim format to a fourth interim format;

converting the second file from the fourth interim format to the second printer-specific printer language; and,

10 sending the second file as converted to the second printer-specific printer language to a second printer for printing.

28. A computer-readable medium having instructions stored thereon to upgrade a device for converting a file according to a printer-independent page description language (PDL) received from a client to a first interim format and for converting the
15 file as converted to a second interim format to a printer-specific printer language for sending to a printer for printing so that the device is able to convert additional files according to one or more additional printer-independent PDL's to the first interim format.

29. The medium of claim 28, wherein the medium is insertable into the device to
20 upgrade the device to support the one or more additional printer-independent PDL's.

30. The medium of claim 28, wherein the instructions are transferable to a host device communicatively coupled to the device, such that the host device executes the

instructions to upgrade the device to support the one or more additional printer-independent PDL's.

31. A computer-readable medium having instructions stored thereon to upgrade a device for converting a file according to a printer-independent page description

5 language (PDL) received from a client to a first interim format and for converting the file as converted to a second interim format to a printer-specific printer language for sending to a printer for printing so that the device is able to convert additional files as converted to the second interim format to one or more additional printer-specific printer languages corresponding and for sending to additional printers.

10 32. The medium of claim 31, wherein the medium is insertable into the device to upgrade the device to support the one or more additional printer-specific printer languages.

33. The medium of claim 31, wherein the instructions are transferable to a host device communicatively coupled to the device, such that the host device executes the
15 instructions to upgrade the device to support the one or more additional printer-specific printer languages.

34. A computer-readable medium having instructions stored thereon for a computer program comprising:

first means for converting a received file according to a printer-independent page
20 description language (PDL) to a first interim format;

second means for converting the received file as converted to a second interim

format to a printer-specific printer language; and,

third means for interfacing the first means with the second means.

35. The medium of claim 34, wherein the first interim format is identical to the second interim format.

- 5 36. The medium of claim 34, wherein the first interim format is different than the second interim format, the third means converting the received file from the first interim format to the second interim format.